

LOW NOISE AMPLIFIER WITH FIXED LOSS BYPASS

ABSTRACT OF THE DISCLOSURE

A low noise amplifier (LNA) has a selectable bypass signal path integrated into the same integrated circuit (IC) as the amplifier components. In a normal mode of operation, an integrated mode switch allows an appropriate biasing signal to be applied to LNA transistors, which function to amplify an input signal and produce an amplified output signal. In an attenuation mode, which is activated to handle large input signals, the LNA transistors are switched off and the input signal is attenuated by a voltage divider, which provides an attenuated output on a signal path that bypasses the LNA amplifier. An attenuation switching signal not only operates the mode switch in the LNA, but also selects between the normal and bypass outputs of the LNA, for further amplification downstream of the LNA.